

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Guenther et al.

Title: GAME BALL LACING

Appl. No.: 10/625,325

Filing Date: July 23, 2003

Examiner: Steven B. Wong

Art Unit: 3711

Mail Stop: APPEAL BRIEF - PATENTS Commissioner for Patents

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### **APPEAL BRIEF UNDER 37 CFR 41.37**

Honorable Sir:

ATTENTION: Board of Patent Appeals and Interferences

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### APPEAL BRIEF

This brief contains in the following sections under the headings and in the order set forth below as required by 37 C.F.R. §41.37(c)(1):

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- G. Claims 1-14 And 51-64 Are Provisionally Rejected On The Ground Of Nonstatutory Obviousness-Type Double Patenting As Being Unpatentable Over Claims 51 And 53-65 Of Copending Application No. 11/018,628.
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The final page of Section vii bears the signature of Applicants' (Appellants') Attorney.

### i. REAL PARTY IN INTEREST (37 C.F.R. §41.37(c)(1)(i))

Wilson Sporting Goods Co. is the real party of interest by virtue of an assignment of the above-referenced application from the inventors, Douglas G. Guenther, Kevin L. Krysiak and Kevin J. Murphy, to Wilson Sporting Goods Co. The Assignment was recorded in the U.S. Patent and Trademark Office at Reel 014328, Frame 0852. Wilson Sporting Goods Co. is a Delaware Corporation having a principal place of business at 8750 W. Bryn Mawr Avenue, Chicago, Illinois 60631.

### ii. RELATED APPEALS AND INTERFERENCES (37 C.F.R. §41.37(c)(1)(ii))

Appellants filed an Appeal under 37 C.F.R. § 41.31 with respect to U.S. Patent Application Serial No. 11/018,628, which is a division of the present Application. No decision has been rendered by the Board regarding this Appeal to date.

### iii. STATUS OF CLAIMS (37 C.F.R. §41.37(c)(1)(iii))

### a. STATUS OF ALL CLAIMS

Claims 1-14 and 51-64 are pending in the present Application. Claims 15-50 have been canceled. The present Appeal is directed to claims 1-14 and 51-64, which were finally rejected in an Office Action mailed June 12, 2007.

### b. CLAIMS ON APPEAL

Claims 1-14 and 51-64 are on appeal.

### iv. STATUS OF AMENDMENT (37 C.F.R. §41.37(c)(1)(iv))

No amendment to the claims has been filed subsequent to the final rejection.

# v. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. §41.37(c)(1)(v))

The present application is directed to a football including a casing having a laced region, and an outwardly extending lacing coupled to the laced region of the casing. (Pages 7 and 8, ¶¶ 0027 and 0029). The lacing has an exposed surface. (Page 9, ¶ 0032). At least a portion of the exposed surface of the lacing has a pebbled texture that is highly grippable when directly contacted by a user's hand. (Pages 10 and 11, ¶¶ 0037 and 0038). The football is configured for use in competitive play. (Pages 3 and 4, ¶ 0005, Page 8, ¶ 0029, Page 9, ¶ 0032, Pages 10 and 11, ¶¶ 0037 and 0038).

# vi. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. §41.37(c)(1)(vi))

- a. Claims 1-14 and 51-64 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Horkan* (U.S. Patent No. 5,570,882) in view of *Martin* (U.S. Patent No. 5,570,882).
- b. Claims 4, 8, 11, 12 and 14 are patentable over *Horkan* in view of *Martin* and *Feeney* (U.S. Patent No. 6,283,881) because *Horkan* teaches away from a combination With *Martin* and/Or *Feeney*.
- c. Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Horkan* in view of *Martin* and *Finley* (U.S. Patent No. 4,991,842).

d. Claims 1-14 and 51-64 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 51 and 53-65 of copending Application No. 11/018,628.

### vii. ARGUMENTS

A. Claims 1-3, 5, 7, 9, 10 and 51-64 Are Not Obvious In View Of Horkan (U.S. Pat. No. 5,570,882) And Martin (U.S. Patent No. 5,570,882), Because Horkan Teaches Away From A Combination With Martin.

Claims 1-3, 5, 7, 9, 10 and 51-64 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Horkan* in view of *Martin*. Claim 1 is an independent claim and claims 2, 3, 5, 7, 9 and 51-64 depend from claim 1. Claim 1 is directed to a football including a casing having a laced region, and an outwardly extending lacing coupled to the laced region of the casing. The lacing has an exposed surface. At least a portion of the exposed surface of the lacing has a pebbled texture that is highly grippable when directly contacted by a user's hand. The football is configured for use in competitive play.

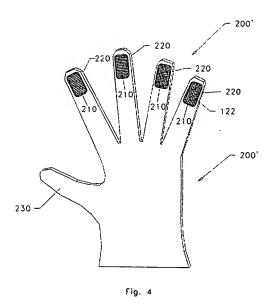
The Examiner maintains *Horkan* teaches modifying the laces of a football to provide a textured surface that improves the gripping of the football. See § 2 of the Final Office Action mailed on June 12, 2007. The Examiner also maintains the secondary reference to Martin teaches that the objective may also be accomplished simply by applying a pebbled texture to the surface. *Id*.

Appellants respectfully submit that the Examiner's characterization of Horkan as teaching modifying the laces of a football to improve the grip thereof is misleading. Horkan alone, or in combination with Martin, does not teach, suggest or disclose the combination of elements of claim 1. In particular, neither Horkan nor Martin disclose a football including a lacing having an exposed surface and at least a porton of the exposed surface of the lacing having a pebbled texture that is highly grippable when directly contacted by a user's hand. Horkan does not teach, suggest or disclose that the Velcro®-type material used for the laces of Horkan is grippable to a user's bare hands. In fact, as discussed below in Section vii. D. below, Independent Lab Testing demonstrates that Velcro-type material has a lower coefficient of friction (and therefore is more slippery) than conventional materials used to make the outer surface of footballs.

Importantly, the proposed combination of *Horkan* and *Martin* is non-obvious because *Horkan* teaches away from such a combination. *Horkan* discloses a training aid comprising a modified football having Velcro®-type material at the laces and glove having the corresponding (or opposite) Velcro®-type material only on the fingertips of the gloves. *Horkan* specifically teaches a high level of grip-ability *only* between the gloved fingertips of the user and the lacing of the training football, and NOT the lacing of the football with other locations of the gloved user's hands, or the user's bare hands.

A reference may be said to teach away when a person of ordinary skill, upon reading the reference would be discouraged, or led in a direction divergent from the path that was taken by the applicant. *In re Icon Health and Fitness, Inc.*, 2007 WL 2189161, at \*5 (Fed. Cir. Aug. 1, 2007) (citing In re Gurley, 27 F.3d 551, 552-53 (Fed. Cir. 1994)). "[W]hen the prior art teaches away from a combination, that combination is more likely to be nonobvious." *Id.* (citing KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740 (2007)). "[A]n applicant may rebut a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect." In re Peterson, 315 F.3d 1325, 1331 (Fed. Cir. 2003) (emphasis added), In re Kumar, 418 F.3d 1361, 1368 (Fed. Cir. 2005).

Further, *Horkan* discloses a football training aid for young football players including a modified toy training football and a glove for use with the modified training football. *Horkan* is intended to assist young football players in properly grasping a football. *Horkan* states that younger football players with smaller hands usually have to cradle the ball in an incorrect palm-up fashion in order to attempt to pass the ball. *Horkan* seeks to prevent this incorrect grasping of the football by providing lacing formed of Velcro® material and a glove having corresponding Velcro® material at the tips of the glove finger stalls (*See* Figure 4 of *Horkan*).



Horkan also emphasizes that his training football is not intended to be effectively grasped by the user at locations other than the lacing. Horkan teaches that the engagement level between the remaining surfaces of the training football and the remaining surfaces of the corresponding gloves be significantly lower to ensure that proper gripping of the training football by the young football player occurs only at the connection of the gloved fingertips of the user and the lacing of the training football.

Horkan repeatedly emphasizes without deviation that the training football is to be grasped <u>only</u> at the laces and <u>only</u> with the use of the corresponding gloves.

For example, Horkan includes the following statements:

"The football is grasped by a user <u>wearing a glove</u> having Velcro® hook elements only at the fingertips thereof." Abstract, lines 2-3 (emphasis added).

- "The <u>restriction</u> of the Velcro® elements to the football lacing and the fingertips of the glove urges the user to grasp the football <u>only</u> at the laces...." Abstract, line 4-6 (emphasis added).
- "The invention relates to a training aid and, more particularly, to a modified football <u>and</u> glove combination...." Col. 1, lines 5-6 (emphasis added).
- "I have invented a training aid in the form of a modified football and glove. The modified football utilizes lacing having one element of a Velcro® fastener combination thereon. A flexible glove has the complementary mating elements of Velcro® fastener combination only at the fingertips thereof. The use of the Velcro only on the laces forces the gloved user to properly grasp the football only at such laces." Col. 1, lines 41-48 (emphasis added).
- "The <u>restriction</u> of the Velcro® loop elements 120 to the lacing 110 of the football 100 is important." Col. 2, lines 40-41 (emphasis added).
- "Accordingly, the mating of the Velcro® elements 122 on glove 200 occurs <u>only</u> when the football 100 is properly grasped <u>by a gloved 200 user at the laces</u> 110 of football 100." Col. 2, lines 43-46 (emphasis added).
- "This <u>restriction</u> urges an initial proper FIG. 1 grasping of the football 100 by a gloved 200 user <u>only</u> at laces 110 as <u>the gloved user cannot effectively grasp the football elsewhere</u>." Col. 2, lines 46-50 (emphasis added).

Horkan requires the Velcro® material to be used only on the laces and the training football is to be used only with a gloved hand. Horkan teaches away from the lacing being highly grip-able to the user's bare hand, and Horkan specifically teaches away from improving the grip-ability of the lacing in general. Rather, Horkan specifically teaches a high level of grip-ability only between the gloved fingertips of the user and the lacing of the training football, and NOT the lacing of the football with other locations of the gloved user's hands. Horkan teaches that a gloved user cannot

effectively grasp the football elsewhere (other than at the Velcro®-laden gloved fingertips).

An attempt to combine *Martin* to the lacing of the modified football of *Horkan*, would completely eliminate the intent and objective of *Horkan*. *Martin* discloses a basketball having a pebbled surface. *Martin* is wholly devoid of any teaching or disclosure of a football or the lacing of a football. Applying pebbles to the laces would defeat *Horkan's* objectives because it would not urge the user's fingertips into proper engagement with the laces of the football, and therefore, would not train the user on the proper way to grasp a football, and to properly impart spin or to improve the grasping or control of the ball as required by *Horkan*. The combination of *Horkan* and *Martin* would eliminate the urging of the user's grasp into proper alignment with the lacing of the football as specifically sought by *Horkan*. Rather, the combination of *Horkan* and *Martin* would render the entire football essentially the same to the user in terms of grasping, and would not urge a user's grasp into proper alignment. Such a combination would wholly defeat the purpose and intent of *Horkan*.

In its Background, *Horkan* addresses a scenario where Velcro® strips were applied to the outer surface of a football for interaction with a player wearing cotton gloves. *Horkan* explains that such a scenario is deficient because it does not assure that the ball is properly grasped only at the laces by the fingertips of the user. The replacement of Velcro material on the laces of *Horkan* with the pebbled surface of *Martin*, as proposed by the Examiner, fails for the same reason. Such a configuration

does not satisfy *Horkan*'s consistent teaching and disclosure that the fingertips of the gloved user be urged or positioned at the laces. Applying pebbles to the laces does not make only the gloved fingertips of a user, or only the fingertips of a user, more grippable than the remaining portions of the user's hands, such as the user's palms. Accordingly, the proposed combination of *Horkan* and *Martin* is misplaced because it is contrary to the specific disclosure, objectives and teaching of *Horkan*. As discussed above, *Horkan* does not teach, suggest or disclose the use of pebbles on the surface of the laces and one of ordinary skill in the art would not look to *Martin* as an alternative to the Velcro® used by *Horkan* because such a substitution would be unworkable and would not meet the consistent objectives of *Horkan*. One of ordinary skill in the art would be led in a different direction by *Horkan* than that taken by the present Application.

Accordingly, Appellants respectfully submit that the claims 1-3, 5, 7, 9, 10 and 51-64 are patentable over the proposed combination of *Horkan* and *Martin* because *Horkan* teaches away from such a combination.

B. Contrary To The Examiner's Assertion, Column 1, Lines 62-67 Of Horkan Support Appellants' Position That Horkan Teaches Away From Improving The Grip-Ability Of The Lacing To A User's Hands.

In the Response to Arguments Section of the Final Office Action mailed on June 12, 2007, the Examiner notes column 1, lines 62-67 of *Horkan* stating that "objectives of the invention are to properly impart spin to a thrown football and improve the user's grasping and controlling of the football." This Response to

Arguments Statement attempts to characterize *Horkan's* objective as to modify the laces of a football in order to generally improve the gripping ability of the ball, including the ability to impart spin to a thrown football and to improve the user's grasping and controlling of the football.

Appellants respectfully disagree with this characterization. In Col. 1, lines 62-67, two of *Horkan's* objectives are listed and each of the objectives is directed to a "training aid, as foresaid," and not to a football alone. The *training aid* in one objective "properly imparts a spin to a thrown football," and in the other, the *training aid* "improves the user's grasping and control of the football."

Horkan specifically defines what "training aid" means. In the very first sentence of Col. 1, Horkan states "[t]his invention relates to a training aid and, more particularly, to a modified football and glove combination ...." (emphasis added).

Horkan's objectives are solely directed to a training aid (the modified football and glove combination). As stated above, Horkan is very specific about the exact configuration of the modified football and the glove combination. The modified football includes one element of a Velcro® patch on the laces of the football, and a corresponding (or opposite) patch of Velcro® placed on the fingertips of the glove.

Horkan's objective and his disclosure are entirely directed to improving the gripping of the fingertips of the gloved user with the laces of a football, in order to allow the user to impart a spin to a thrown football and improve the grasping and control of the football with his or her hand in the proper position (the gloved fingertips contacting the

laces). The training aid of *Horkan* is intended to train the user to grasp a football correctly.

The objectives cited in the Office Action on Col. 1, lines 62-67 are directed to *Horkan*'s training aid and would <u>not</u> suggest to one of ordinary skill in the art to look at other arrangement for the laces that would generally improve the gripping and controlling of the football to users hands. As stated above, *Horkan* requires increased engagement between the laces and only the fingertips of the gloved user in order to train users (in particular young users) to properly grasp and throw a football.

It is not *Horkan*'s objective, and it is not *Horkan*'s teaching, to generally increase the gripping ability of the laces of a football. Rather, as stated above, *Horkan* specifically teaches away from generally increasing the gripping ability of laces. *Horkan*'s objective is not to increase the gripping ability of the laces of a football to a user's bare palms, or a user's bare fingers in general. To do so, would defeat the purpose of *Horkan*'s training aid invention. *Horkan*'s training aid disclosure calls for an improved grip only at the fingertips to teach the user the correct way to hold a football.

C. In The Re-Examination Of U.S. Patent No. 6,964,625, The Examiner And Conferees Concluded That Horkan Teaches Away From Improving The Grip-Ability of The Lacing.

U.S. Patent No. 6,964,625 ("the '625 Patent") was filed on October 19, 2002 under U.S. Patent Application Serial No. 10/274,704, as a division of U.S. Patent

Application Serial No. 09/946,037 ("the '037 Application), now U.S. Patent No. 6,629,902. The '037 Application is a parent of the present Application.

On September 26, 2006, Appellants filed for a re-examination of the '625 Patent specifically to address the *Horkan* reference. On April 16, 2007, the U.S. Patent and Trademark Office mailed a Notice of Intent to Issue Ex Parte Reexamination

Certificate for the '625 Patent (attached as Exhibit A in the Evidence Appendix). The re-examination addressed the issue of whether *Horkan* teaches away from lacing that is highly grippable to a user's hands.

Attached to the Notice of Intent to Issue Ex Parte Reexamination

Certificate is a Statement of Reasons For Patentability And/Or Confirmation, including
the Examiner's statement of reasons for patentability an/or confirmation of claims found
patentable in the reexamination proceeding. The Statement of Reasons included the
following statements:

- "Horkan fails to teach a lacing wherein the outer exposed surface is pebbled ..."
- "The Examiner agrees with Patent Owner's characterizations of Horkan ... that "Horkan specifically teaches away from improving the grip-ability of the lacing in general." Rather, Horkan specifically teaches a high level of grip-ability only between the gloved fingertips of the user and the lacing of the training football and NOT the lacing of the football with other locations of the gloved user's hands."

 "Horkan also teaches away from the training football being grasped or directly contacted by the user's hand."

Accordingly the Examiner performing the reexamination of the '625 Patent and the two Conferees (two additional Examiners) **all agreed** that the claims of the '625 Patent on reexamination were patentable over *Horkan*. Additionally, the Examiner and the two Conferees also concluded that: *Horkan* taught away from a lacing having an exposed surface that is pebbled; *Horkan* specifically teaches away from improving the grip-ability of the lacing in general; and *Horkan* also teaches away from the training football being grasped or directly contacted by the user's hand.

Ex Parte Reexamination Certificate U.S 6,964,625 C1 issued on October 16, 2007 is attached as Exhibit B.

D. Independent Lab Testing Illustrates That Horkan's Lacing Formed Of Velcro <sup>®</sup> Type Material Does Not Improve The Grip-Ability Of The Lacing To A User's Hands.

As described above, *Horkan* alone, or in combination with *Martin*, does not teach, suggest or disclose the combination of elements of claim 1. In particular, neither *Horkan* nor *Martin* disclose a football including a lacing having an exposed surface and at least a portion of the exposed surface of the lacing having a pebbled texture that is highly grippable when directly contacted by a user's hand.

Horkan discloses a modified football and glove combination for teaching a player to correctly grasp and throw a football. Horkan seeks to prevent incorrect grasping of the football by providing lacing formed of Velcro® material and a glove having corresponding Velcro® material at the tips of the glove finger stalls. The Velcro® material used on the lacing is preferably loop-type Velcro® material, but hook-type Velcro® material can also be used. The corresponding (or opposite) Velcro® type material is then applied to the fingertips of the gloves worn by the player or user.

Importantly, Velcro® loop material or Velcro® hook material by itself (without use of the corresponding hook or loop material by the gloved user) is much less grip-able (more slippery) than the materials typically used to form the outer surface of footballs (natural leather and synthetic leather). Accordingly, if the modified football of Horkan is used without the required gloves of Horkan, the lacing formed of Velcro® like hook or loop material would provide less frictional resistance to a user's hands than other common materials used for making the outer surface of footballs, such as synthetic leather or natural leather.

Appellants attach a copy of an Affidavit submitted in U.S. Patent

Application Serial No. 10/325,421 (now U.S. Patent No. 7,029,407). See Exhibit C of
the Evidence Appendix. The Affidavit includes a true and accurate copy of a test report
entitled "Coefficient of Friction Testing of Various Materials" by Gaynes Labs
Incorporated, an independent test laboratory, located at 9708 Industrial Drive,
Bridgeview, Illinois 60455 ("Gaynes Labs"). The test report is the result of an effort to

investigate the frictional characteristics of hook and loop materials (such as Velcro® loop material and Velcro® hook material). The assignee of the present Application, Wilson Sporting Goods Co. ("Wilson") contacted Velcro Group Incorporated, the producer of Velcro® brand hook and loop materials, requesting coefficient of friction information relating to Velcro® loop material and Velcro® hook material used separately on a smooth surface. Velcro Group Incorporated provided test results showing static coefficient of friction values for Velcro® hook and loop specimens tested separately on a smooth surface in accordance with ASTM D1894. Because these test results were provided by Velcro Group Incorporated on a confidential basis, the results cannot be submitted to the Patent Office; however, as described below independent testing of Gaynes Labs brought forth the same conclusion: hook or loop material used separately apart from the corresponding (or opposite) loop or hook material produces very low static coefficient of friction values. In fact, the static coefficient of friction values of such Velcro material used separately is significantly lower (more slippery) than materials commonly used to form the outer surface of a game ball, such as a football.

The independent testing of Gaynes Labs was consistent with the information provided by Velcro Group Incorporated. The independent testing compared the coefficient of friction test results of several different materials against a smooth surface. The materials included Velcro® hook and loop material, a synthetic leather material, leather, and a representative smooth material, such as a plate of glass. The test report includes coefficient of friction testing results of the following materials: five pieces

of a white single tone polyurethane ("PU") material used to form stripes on a football; five pieces of a brown dual-tone PU material used to form the cover panel of a synthetic leather football; five pieces of genuine leather used to form a leather football; representative specimens of a Velcro® loop material; representative specimens of a Velcro® hook material; and a smooth plate of glass. Each material was testing in accordance with the American Society for Testing and Materials standard ASTM D1894-01 "Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting" promulgated by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, 19428.

The results of the test report illustrate that the average static coefficient of friction of five specimens of Velcro® hook material was 0.13 (measured separately on a smooth surface), and the average static coefficient of friction of five specimens of Velcro® loop material measuring 0.18 (also measured separately on a smooth surface). This result is consistent with the static coefficient of friction information Wilson received from Velcro Group Corporation. The independent test report also demonstrated that the coefficient of friction of genuine leather, synthetic leather (the brown dual-tone PU specimens) and the PU material used to form stripes (white single tone PU specimens) on a football all had average static coefficient of friction values that were much higher than the average static coefficient of friction values of either the Velcro® loop material specimens or the Velcro® hook material specimens.

The average static coefficient of friction values for the Velcro® hook and loop materials separately was comparable to the average static coefficient of friction values of a smooth plate of glass. The test results for the smooth plate of glass resulted in an average static coefficient of friction value of 0.16.

The genuine leather specimens had an average static coefficient of friction value of 0.39, which is over twice as high as the average static coefficient of friction values of the Velcro® loop material specimens or the Velcro® hook material specimens.

The genuine leather specimens were the same leather that is used to produce the covers of leather footballs. It is important to note that the leather footballs typically becomes more tactile or tacky over time as the leather is used and breaks in.

The PU test specimens used to form the outer cover of many game balls had average static coefficient of friction values of 3.48 and 4.02, respectively. Each of these values are significantly higher (at least an order of magnitude higher) than the average static coefficient of friction values of either the Velcro® loop material specimens or the Velcro® hook material specimens.

Therefore, the test report of the attached affidavit demonstrates the hook or loop material used on the outer surface of a game ball, such as the lacing of *Horkan*, without the gloves required by *Horkan*, results in a football lacing that is **not** highly gripable when directly contacted by the hands of a user. Rather, a football lacing formed of Velcro® hook or loop material would be less grip-able, and therefore more slippery, to a

user's bare hand than conventional game ball materials, such as natural leather or synthetic leather.

Accordingly, the test data shows that *Horkan* does not teach modifying the laces of a football in order to improve the grip thereof as proposed by Examiner. Rather, *Horkan* teaches a modified football having lacing that provides an improved grip **only** to the gloved fingertips of a user. Without the required gloves of *Horkan*, the lacing of *Horkan* actually provides a reduced or less grip to the bare hands of a user, because Velcro® like hook and loop materials each have very low coefficient of friction values when measured alone. Additionally, as stated above, without the use of gloves having the corresponding Velcro®-type material on its fingertips, as specifically required by *Horkan*, nothing would urge the user's hands into proper grasping position of the football. Therefore, one of ordinary skill in the art would not find that *Horkan* teaches a lacing with an improved grip to a user's hands.

E. Claims 4, 8, 11, 12 And 14 Are Patentable Over Horkan In View Of Martin And Feeney (U.S. Patent No. 6,283,881) Because Horkan Teaches Away From A Combination With Martin And/Or Feeney.

Claims 4, 8, 11, 12 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Horkan* in view of *Martin* and *Feeney*. Claims 4, 8, 11, 12 and 14 depend from independent claim 1. It is respectfully submitted that claims 4, 8, 11, 12 and 14 are patentable over *Horkan* in view of *Martin* and *Feeney* for at least the same reasons as discussed above relating to claim 1. *Feeney*, like *Martin*, discloses a

game ball, such as a basketball, including a plurality of panels having projections. The projections of *Feeney* are generally formed in the shape of closed loops. *Feeney*, alone or in combination with the cited art, does not teach, suggest or disclose the combination of elements and limitations of claim 1. In particular, *Feeney* does not teach, suggest or disclose a football including a casing having a laced region, and an outwardly extending lacing coupled to the laced region of the casing, wherein the lacing has an exposed surface, and at least a portion of the exposed surface of the lacing has a pebbled texture that is highly grippable when directly contacted by a user's hand.

Horkan, Martin and Feeney, alone or in combination, do not teach, disclose or suggest the game ball of claim 1. Accordingly, it is respectfully submitted that claims 4, 8, 11, 12 and 14, which depend from amended claim 1, are patentable over Horkan, Martin, and Feeney for at least the same reasons.

F. Claim 6 Is Patentable Over Horkan In View Of Martin And Finley (U.S. Patent No. 4,991,842) Because Horkan Teaches Away From A Combination With Martin And/Or Finley.

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Horkan* in view of *Martin* and *Finley*. Claim 6 depends from independent claim 51. It is respectfully submitted that claim 6 is patentable over *Horkan* in view of *Martin* and *Finley* for at least the same reasons as discussed above relating to claim 1. *Finley* discloses a spherical basketball having a plurality of recesses formed on the exterior of the basketball and a network of interconnected ridges separating adjacent ridges. *Finley*, alone or in combination with the cited art, does not teach, suggest or

disclose the combination of elements and limitations of claim 1. In particular, *Finley* does not teach, suggest or disclose a football including a casing having a laced region, and an outwardly extending lacing coupled to the laced region of the casing, wherein the lacing has an exposed surface, and at least a portion of the exposed surface of the lacing has a pebbled texture that is highly grippable when directly contacted by a user's hand.

Horkan, Martin and Finley, alone or in combination, do not teach, disclose or suggest the game ball of claim 1. Accordingly, it is respectfully submitted that claim 6, which depend from amended claim 1, is patentable over Horkan, Martin, and Finley for at least the same reasons.

G. Claims 1-14 And 51-64 Are Provisionally Rejected On The Ground Of Nonstatutory Obviousness-Type Double Patenting As Being Unpatentable Over Claims 51 And 53-65 Of Copending Application No. 11/018,628.

Section 6 of the Final Office Action mailed on June 12, 2007 provisionally rejected claims 1-14 and 51-64 under the judicially created doctrine of obviousness-type double patenting over claim 51 and 53-65 of copending Application No. 11/018,628. Appellants do not object to this provisional rejection and are prepared to submit a terminal disclaimer to obviate the double patenting rejection as necessary.

### H. Conclusion

Claims 1-14 and 51-64 stand rejected under 35 U.S.C. § 103(a) based upon *Horkan* in view of *Martin, Feeney and Finley*. However, the references cited by

the Examiner, when taken in any permissible combination, do not disclose, teach or suggest the combination of elements of the claims of the present Application. Morever, *Horkan* teaches away from the proposed combination with *Martin*, *Feeney or Finley*.

Accordingly, Applicant respectfully submits that the final rejection of the claims 1-14 and 51-64 must be reversed, and the claims allowed.

Pursuant to 37 C.F.R. § 41.20(b)(2), Applicant authorizes the Commissioner to charge Deposit Account No. 501959 in the amount of \$510.00 to cover the filing fee for filing a brief in support of appeal. Commissioner is also hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 501959.

Respectfully submitted,

Terence P. O'Brien

Attorney for Applicants

Registration No. 43,840

Date <u>J2 December</u> 3007 Wilson Sporting Goods Co. 8750 W. Bryn Mawr Avenue

Chicago, IL 60631

Telephone:

(773) 714-6498

Facsimile:

(773) 714-4557

### viii. CLAIMS APPENDIX

1

- 1. A football comprising:
- a casing having a laced region; and
- an outwardly extending lacing coupled to the laced region of the casing,
- 4 the lacing having an exposed surface, at least a portion of the exposed surface of the
- 5 lacing having a pebbled texture that is highly grippable when directly contacted by a
- 6 user's hand, the football being configured for use in competitive play.
- The game ball of claim 1, wherein the entire exposed surface of the
- 2 lacing includes the pebbled texture.
- The game ball of claim 1, wherein the pebbled texture comprises a
- 2 plurality of spaced apart pebble-like projections.
- 1 4. The game ball of claim 3, wherein the plurality of projections consist of
- 2 any combination of at least two shapes selected from the group consisting of irregularly
- 3 shaped pebble-like projections, hemi-spherically shaped projections, generally oval
- 4 shaped projections, generally triangular shaped projections, generally square shaped
- 5 projections, generally rectangular shaped projections, generally diamond shaped
- 6 projections, generally pentagon-shaped projections, other polygonal shaped projections,
- 7 conical projections, frustoconical projections, cylindrical projections, pyramid-shaped
- 8 projections, and cubic projections.

- The game ball of claim 3, wherein the plurality of projections are
- 2 arranged in a generally evenly spaced pattern across at least a portion of the exposed
- 3 surface.
- 1 6. The game ball of claim 3, wherein the plurality of projections are
- 2 randomly arranged across at least a portion of the exposed surface.
- The game ball of claim 3, wherein the plurality of projections are
- 2 generally of equal size.
- The game ball of claim 3, wherein the plurality of projections include
- 2 projections of two or more different sizes.
- The game ball of claim 3, wherein each of the pebble-like projections has
- 2 a maximum length and a maximum width, and wherein the maximum length and the
- maximum width define an aspect ratio of within 0.2 and 5.0.
- 10. The game ball of claim 9, wherein the aspect ratio is within 0.33 and
- 2 3.0.
- 1 The game ball of claim 4 wherein the lacing includes at least one
- 2 longitudinally extending segment and a plurality of transversely extending segments,
- wherein the plurality of projections on the longitudinally extending segment have a first
- 4 shape, and wherein the plurality of projections on the transversely extending segment
- 5 have a second shape.

- 1 12. The game ball of claim 4, wherein the entire exposed surface of the lacing includes a plurality of pebble-like projections.
- 13. The game ball of claim 4, wherein the lacing further comprises an inner substrate and an outer layer, wherein the outer layer includes the exposed surface, and wherein the inner substrate is formed from one or more materials selected from the group consisting of a woven cloth, a non-woven cloth, a urethane impregnated cloth, at least one nylon strand, at least one polyester strand, a metal wire, a plastic, a vinyl, a polymer, a latex, a rope, a leather strip and a combination thereof.
- 1 14. The game ball of claim 13 wherein the outer layer is made of an outer
  2 material selected from the group consisting of a wet process polyurethane, a dry
  3 process polyurethane, a coagulated polyurethane, a polyvinylchloride foam, a rubber, a
  4 polymeric material, an elastomeric material, and a combination thereof.

### Claims 15-50 are canceled.

- 1 51. The game ball of claim 3, wherein the plurality of projections are 2 irregularly shaped pebble-like projections.
- The game ball of claim 3, wherein the plurality of projections are hemispherically shaped projections.
- The game ball of claim 3, wherein the plurality of projections are generally oval shaped projections.

- 1 54. The game ball of claim 3, wherein the plurality of projections are
- 2 generally triangular shaped projections.
- The game ball of claim 3, wherein the plurality of projections are
- 2 generally square shaped projections.
- The game ball of claim 3, wherein the plurality of projections are
- 2 generally rectangular shaped projections.
- The game ball of claim 3, wherein the plurality of projections are
- 2 generally diamond shaped projections.
- The game ball of claim 3, wherein the plurality of projections are
- 2 generally pentagon-shaped projections.
- The game ball of claim 3, wherein the plurality of projections are
- 2 polygonal shaped projections.
- 1 60. The game ball of claim 3, wherein the plurality of projections are conical
- 2 projections.
- 1 61. The game ball of claim 3, wherein the plurality of projections are
- 2 frustoconical projections.
- The game ball of claim 3, wherein the plurality of projections are
- 2 cylindrical projections.

1 63. The game ball of claim 3, wherein the plurality of projections are

- 2 pyramid-shaped projections.
- 1 64. The game ball of claim 3, wherein the plurality of projections are
- 2 cubic projections

### ix. EVIDENCE APPENDIX

EXHIBIT A: Notice of Intent to Issue Ex Parte Reexamination Certificate from the U.S. Patent and Trademark Office Relating To The Reexamination of U.S. Patent No. 6,964,625 Mailed On April 16, 2007.

EXHIBIT B: Ex Parte Reexamination Certificate U.S. 6,964,625 C1 issued on October 16, 2007.

EXHIBIT C: Affidavit Of Douglas G. Guenther Dated November 3, 2005 Including A True And Accurate Copy Of A Test Report Entitled "Coefficient Of Friction Testing Of Various Materials" By Gaynes Labs Incorporated, An Independent Test Laboratory, Located At 9708 Industrial Drive, Bridgeview, Illinois 60455.

## x. RELATED PROCEEDINGS APPENDIX

None

DEC 12 2007	O TRADEMARK OFFICE  UNITED STATES DEPARTMENT OF COMMERCE United States Potent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Bos 1450 Alexandria, Virginia 22313-1450 www.uspio.gov		
APPLICATE NO. APPLING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/008,247 09/26/2006	6964625	WTO125 Rc-Ex	8714
7590 04/16/2007	•	EXAMINER	
Terence P. O'Brien			·
WILSON SPORTING GOODS & CO. 8700 W. Bryn Mawr Ave.	•	ART UNIT	PAPER NUMBER
Chicago, IL 60631			
- <b>5</b> -		DATE MAILED: 04/16/2007	

Please find below and/or attached an Office communication concerning this application or proceeding.

2 2007 W	Control No.	Patent Under Reexamination	
#/ Nonce of Intent to Issue	90/008,247		
Fax Parte Reexamination Certificate	Examiner	Art Unit	
TRACE, TO THE REEXAMINIATION CERTIficate	Jeffrey R. Jastrzab		
The MAILING DATE of this communication appears	on the cover sheet with the	o cormon	
subject to reopening at the initiative of the Office or issued in view of  (a) Patent owner's communication(s) filed: 26 S  (b) Patent owner's late response filed:  (c) Patent owner's failure to file an appropriate  (d) Patent owner's failure to timely file an Appeal of the Claim (s) in the Specification:  (f) Change in the Specification:  (g) Change in the Drawing(s):  (h) Status of the Claim (s):  (1) Patent claim (s) confirmed: 1-22, 24 and 25 (2) Patent claim (s) amended (including dependent)	his ex parte reexamination upon petition. Cf. 37 CFR September 2006.  response to the Office action Brief (37 CFR 41.31).	proceeding. This proceeding is 1.313(a). A Certificate will be on mailed:	
<ul> <li>(3) Patent claim(s) cancelled: 23.</li> <li>(4) Newly presented claim(s) patentable: 26-5</li> <li>(5) Newly presented cancelled claims:</li> <li>Note the attached statement of reasons for patentab necessary by patent owner regarding reasons for patentabito avoid processing delays. Such submission(s) show Patentability and/or Confirmation."</li> </ul>	ility and/or confirmation. A	ny comments considered	
Note attached NOTICE OF REFERENCES CITED (I			
Note attached LIST OF REFERENCES CITED (PTC	)/SB/08).		
☐ The drawing correction request filed on is: ☐	approved  disappro	wod	
Acknowledgment is made of the priority claim under a) □ All b) □ Some* c) □ None of the cert □ been received. □ not been received. □ been filed in Application No. □ been filed in reexamination Control No. □ been received by the International Bure	35 U.S.C. § 119(a)-(d) or ( ified copies have	f).	
Certified copies not received:			
Note attached Examiner's Amendment.			
Note attached Interview Summary (PTO-474).			
Other:			

Jeffrey R. Jastrzab Primary Examiner Art Unit: 3993

Art Unit: 3993

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. The changes made by this examiner's amendment will be reflected in the reexamination certificate to issue in due course.

Claim 40 is rewritten as follows:

40. (new) A lacing for a football wherein the lacing includes an inner substrate fixedly coupled to an outer layer, the outer layer of the lacing having an exposed surface made of an outer polymeric material that is compressible, resilient, and highly grip-able when directly contacted by a user's hand, the lacing further including at least one longitudinally extending segment and a plurality of transversely extending segments, the football configured for use in competitive play.

# STATEMENT OF REASONS FOR PATENTABILITY AND/OR CONFIRMATION

The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

With respect to independent patent claims 1 through 7, and newly submitted independent claims 26 and 40, the newly submitted prior art to Horkan fails to teach or fairly suggest a lacing having and inner substrate with an outer layer. Horkan instead teaches a Velcro ™ type hook and look fastening material. Furthermore Horkan fails to teach a lacing wherein the outer exposed surface is pebbled; a lacing comprising an outer layer made of a wet or dry process polyurethane, polyvinylchloride foam or a combination thereof; a lacing an inner substrate with either a top and bottom side outer

Art Unit: 3993

layer, or the outer layer is attached only to the top side. The Examiner agrees with Patent Owner's characterizations of Horkan on pages 14-16 of the comments filed with the preliminary amendment filed 9/29/07, and more particularly that "Horkan specifically teaches away from improving the grip-ability of the lacing in general. Rather, Horkan specifically teaches a high level of grip-ability only between the gloved fingertips of the user and the lacing of the training football, and NOT the lacing of the football with other locations of the gloved user's hands. Horkan also teaches away from the training football being grasped or directly contacted by the user's hand." In order for the textured surface of Horkan to accomplish the even the desired tactile feel or grip-ability claimed, the effect of the combined hook and loop frictional interaction would need to be incorporated into the lacing alone, which it is not.

Any comments considered necessary by PATENT OWNER regarding the above statement must be submitted promptly to avoid processing delays. Such submission by the patent owner should be labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

All correspondence relating to this ex parte reexamination proceeding should be directed as follows:

## By U.S. Postal Service Mail to:

Mail Stop Ex Parte Reexam ATTN: Central Reexamination Unit Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 Application/Control Number: 90/008,247

Art Unit: 3993

Page 4

By FAX to:

(571) 273-9900

Central Reexamination Unit

By hand to: Customer Service Window

Randolph Building 401 Dulany St.

Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Primary Examiner

Central Reexamination Unit

AU 3993

(571) 272-4947

Conferee

Conferee

# (12) EX PARTE REEXAMINATION CERTIFICATE (5950th)

# **United States Patent**

Murphy et al.

(10) Number:

US 6,964,625 C1

(45) Certificate Issued:

\*Oct. 16, 2007

### (54) GAME BALL LACING

(75) Inventors: Kevin J. Murphy, Chicago, IL (US);
Douglas G. Guenther, Wheaton, IL

(US)

(73) Assignee: Wilson Sporting Goods & Co.,

Chicago, IL (US)

### Reexamination Request:

No. 90/008,247, Sep. 26, 2006

## Reexamination Certificate for:

Patent No.:

6,964,625

Issued:

Nov. 15, 2005

Appl. No.: Filed:

10/274,704 Oct. 19, 2002

(\*) Notice:

This patent is subject to a terminal dis-

claimer.

#### Related U.S. Application Data

(62) Division of application No. 09/946,037, filed on Sep. 4, 2001, now Pat. No. 6,629,902.

(51) Int. Cl.

A63B 43/02 B32B 3/26 B32B 7/02

D02G 3/36 A43C 1/00 (2006.01) (2006.01) (2006.01)

(2006.01)

(2006.01)

(58) Field of Classification Search ...... None See application file for complete search history.

(56) References Cited

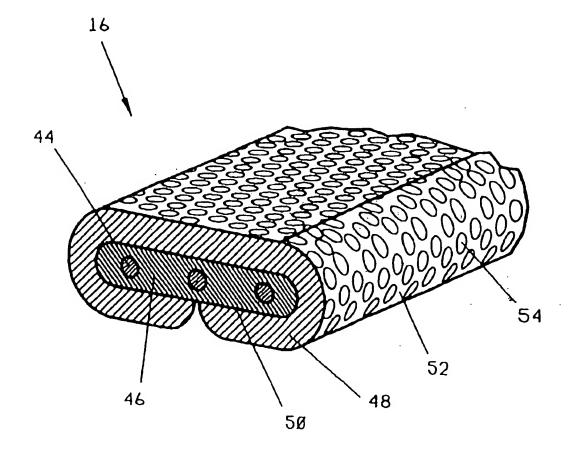
#### U.S. PATENT DOCUMENTS

5,570,882 A 11/1996 Horkan

Primary Examiner-Jeffrey R. Jastrzab

### (57) ABSTRACT

A game ball including a casing and a lacing. The casing has a laced region. The lacing is coupled to the laced region of the casing. The lacing bas an exposed surface comprised of an outer material that is compressible, resilient, and tactile. The outer material has a modulus of elasticity of between 14 and 170 kg/cm<sup>2</sup> and a tensile strength between 100 and 650 kg/cm<sup>2</sup>. At least a portion of the lacing can have an exposed pebbled surface.



# EX PARTE REEXAMINATION CERTIFICATE ISSUED UNDER 35 U.S.C. 307

# THE PATENT IS HEREBY AMENDED AS INDICATED BELOW.

Matter enclosed in heavy brackets [ ] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

# AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims 1-22, 24 and 25 is confirmed.

Claim 23 is cancelled.

New claims 26-53 are added and determined to be patentable.

26. A locing for a game ball, wherein the lacing is 42. The lac configured for direct contact with a user's hands, the lacing 25 flexible body. comprising: 43. The lac

an inner substrate and

- an outer layer fixedly coupled to the inner substrate, the outer layer of the lacing having an exposed surface made of an outer polymeric material that is 30 compressible, resilient and highly grip-able, the exposed surface providing a high level of frictional interaction with the hands of the user, the lacing further including at least one longitudinally extending segment and a plurality of transversely extending segments, the 35 game ball configured for use in competitive play.
- 27. The lacing of claim 26, wherein the outer layer is a sheet.
- 28. The lacing of claim 27, wherein the sheet is a unitary flexible body.
- 29. The lacing of claim 27, wherein the thickness of the sheet between the exposed surface and an inner surface of the sheet is a generally uniform and continuous.
- 30. The lacing of claim 26, wherein the lacing has a generally oval transverse cross-sectional shape.
- 31. The lacing of claim 26, wherein the lacing has a generally circular transverse cross-sectional shape.
- 32. The lacing of claim 26, wherein the outer layer is a porous or spongy polymeric foam layer.
- 33. The lacing of claim 26, wherein the polymeric mate 50 rial is a polyurethane.
- 34. The lacing of claim 26, wherein the polymeric material is a wet-process polyurethane or a dry process polyurethane.
- 35. The lacing of claim 26, wherein the polymeric mate 55 rial is a polyvinylchloride.

36. The lacing of claim 26, wherein the inner substrate has a top side and a bottom side, and wherein the outer layer is extends over only the top side.

37. The lacing of claim 26, wherein the outer layer

5 substantially surrounds the inner substrate.

38. The lacing of claim 26, wherein the inner substrate is formed from at least one material selected from the group consisting of a woven cloth, a non-woven cloth, a urethane impregnated cloth, and a combination thereof.

39. The lacing of claim 26, wherein the inner substrate is formed from at least one material selected from the group consisting of at least one nylon strand, at least one polyester strand, a plastic, a metal wire, a polymer, a latex, a rope, a

leather strip, and a combination thereof.

- 40. A lacing for a football wherein the lacing includes an inner substrate fixedly coupled to an outer layer, the outer layer of the lacing having an exposed surface made of an outer polymeric material that is compressible, resilient, and highly grip-able when directly contacted by a user's hand, the lacing further including at least one longitudinally extending segment and a plurality of transversely extending segments, the football configured for use in competitive play.
  - 41. The lacing of claim 40, wherein the outer layer is a sheet.
  - 42. The lacing of claim 40, wherein the sheet is a unitary Rexible body.
  - 43. The lacing of claim 40, wherein the thickness of the sheet between the exposed surface and an inner surface of the sheet is generally uniform and continuous.

44. The lacing of claim 40, wherein the lacing has generally oval transverse cross-sectional shape.

45. The lacing of claim 40, wherein the lacing has a generally circular transverse cross-sectional shape.

46. The lacing of claim 40, wherein the outer layer is a porous or spongy polymeric foam layer.

47. The lacing of claim 40, wherein the polymeric material is a polyurethane.

- 48. The lacing of claim 40, wherein the polymeric material is a wet-process polyurethane or a dry process polyurethane.
- 49. The lacing of claim 40, wherein the polymeric mate-40 rial is a polyvinylchloride.
  - 50. The lacing of claim 40, wherein the inner substrate has a top side and a bottom side, and wherein the outer layer is extends over only the top side.
- 51. The lacing of claim 40, wherein the outer layer 45 substantially surrounds the inner substrate.
  - 52. The lacing of claim 26, wherein the inner substrate is formed from at least one material selected from the group consisting of a woven cloth, a non-woven cloth, a urethane impregnated cloth, and a combination thereof.
  - 53. The lacing of claim 26, wherein the inner substrate is formed from at least one material selected from the group consisting of at least one nylon strand, at least one polyester strand, a plastic, a metal wire, a polymer, a latex, a rope, a leather strip, and a combination thereof.

. . . . .

# UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Guenther et al.

Title:

GAME BALL COVER WITH

IMPROVED STRIPES AND/OR LOGOS

Appl. No.:

10/325,421

Filing Date:

December 20, 2002

Examiner:

Steven B. Wong

Art Unit:

3711

# AFFIDAVIT OF DOUGLAS G. GUENTHER IN ACCORDANCE WITH 37 C.F.R. § 1.116(e)

- 1, Douglas G. Guenther, depose and state as follows:
- 1. I am, and at all relevant times have been, the Director of Research & Development, Team Sports Division of Wilson Sporting Goods Co. ("Wilson"). I have personal knowledge of all of the facts set forth in this affidavit.
- 2. In an effort to obtain coefficient of friction information for a variety of different materials, in September 2005, Wilson Sporting Goods Co. ("Wilson"), under my direction, sought out an independent test laboratory to perform coefficient of friction testing of various materials in accordance with ASTM #D 1894-01 "Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting." The materials tested included: a white single tone polyurethane ("PU") material used to form stripes on a football; a brown dual tone PU material used to form the cover panel of a synthetic leather football; genuine leather used to form the cover of a leather football; representative specimens of a Velcro® loop material; representative specimens of a Velcro® loop material;

obtained the services of Gaynes Labs, Incorporated of Bridgeview, Illinois, an independent test laboratory, to perform the coefficient of friction testing. The test report includes the test procedure used and the results of the coefficient of friction testing.

- 3. On October 10, 2005, Gaynes Labs, Incorporated issued a test report regarding Coefficient of Friction Testing of Various Materials. A true and accurate copy of the test report from Gaynes Labs, Incorporated dated October 10, 2005 is attached to this Affidavit.
- 4. The test results demonstrated that the average static coefficient of friction value of five specimens of a Velcro® hook material was lower than the average static coefficient of friction value of five specimens of a Velcro® loop material. This result is consistent with coefficient of friction testing information we received from Velcro Group Incorporated.
- 5. The test results also demonstrate that the average static coefficient of friction values obtained from the testing of five specimens of each of the following three materials (genuine leather, a white PU material, and a brown PU material) were each significantly higher than the average static coefficient of friction value obtained from the Velcro® hook material and the Velcro® loop material.

FURTHER AFFIANT SAYETH NAUGHT.

Douglas G. Guenther

Director of Research & Development

**Team Sports Division** 

Wilson Sporting Goods Co.

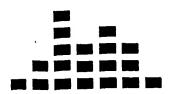
Subscribed and sworn to before me

this 3 day of November, 2005.

 $\overline{\phantom{a}}$ 

Notary Public

"OFFICIAL SEAL"
Terence P. O'Brien
Notary Public, State of Illinois
My Commission Exp. 05/07/2006



# GAYNES LABS, INCORPORATED

9708 INDUSTRIAL DRIVE • BRIDGEVIEW, ILLINOIS 60455

MEMBER: AMERICAN COUNCIL OF INDEPENDENT LABORATORIES

PHONE: 708-233-6655 FAX: 708-233-6985

EMAIL: gayneslabs@aol.com http://www.nrinc.com/gaynes

October 10, 2005

Wilson Sporting Goods Company 8700 West Bryn Mawr Avenue Chicago, Illinois 60631

Attention: Mr. Kevin Krysiak

Regarding: Coefficient of Friction Testing of Various Materials

Our Job No. 05448

Dear Mr. Krysiak:

Please find below the results of the tests that were conducted on the following materials:

- 1) 5 pieces, approximately 2.6" w. x 2.6" l., of white single tone PU material.
- 2) 5 pieces, approximately 2.6" w. x 2.6" l, of brown dual-tone PU material.
- 3) 5 pieces, approximately 2.6" w. x 2.6" l, of burnt orange genuine leather.
- 4) 1 roll, approximately 2" w. x 32" l., of white hook material.
- 5) I roll, approximately 2" w. x 32" l., of white loop material.
- 6) I piece, 2.5" w. x 2.5" l., of smooth plate glass, normally used for residential windows.

## **TEST PROCEDURE:**

The tests were conducted based upon ASTM D1894-01 Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting and your verbal instructions. The test materials were conditioned for a minimum of 48 hours at 73°F and 50% R. H. prior to testing and all tests were conducted at these conditions. The materials were prepared for testing as follows:

- 1) White Single Tone PU Material The submitted samples were trimmed to 2.5" w. x 2.5" l.
- 2) Brown Dual-Tone PU Material The submitted samples were trimmed to 2.5" w. x 2.5" 1.
- 3) Burnt Orange Genuine Leather The submitted samples were trimmed to 2.5" w. x 2.5" 1.
- 4) White Hook Material 2.5" l. sections were cut from the submitted roll. The left margin of one section removed. The right margin of another section was removed. The two samples were attached side by side (sides with margin removed touching) to the bottom of the sled. The seam was centered front to back on the sled. The overhanging material was removed.

## GAYNES LABS INCORPORATED

# TEST PROCEDURE: (Continued)

- 5) White Loop Material Same preparation as the Hook Material. A typical test sample, attached to the sled bottom, is shown in Photo No. 1.
- 6) Plate Glass The edges of the cut glass piece were rounded slightly with a diamond file. The glass surfaces were cleaned with a mild detergent followed by a residue-free solvent.

A metal sled, approximately 2.5" l. x 2.5" w. x 0.25" t. was fabricated. The bottom of the sled was lined with the specified high density foam. Prior to each test, the weight of the sled, with the sample attached, was adjusted to 453.59 grams (1 lb.), as requested. The sled on the runway is shown in Photo No. 2

The runway was cleaned with isopropyl alcohol and dried with a soft, lint-free cloth. The sled, with the sample to be tested attached, was gently placed on the surface of the runway (304 Stainless-Steel, #8 Mirror Surface). The sled was pulled across the runway at a speed of 152.4 mm per minute for a total distance of 200 mm. The mirrored surface is shown in Photo No. 3. An overall view of the test setup is shown in Photo No 4.

The initial force to start sled movement and the average force from the 25 mm distance to the 175 mm distance were reported. The sled weight was divided into these values to obtain the Static and Kinetic Coefficient of Friction. One sample of the glass was tested 5 times. Five different samples for each of the remaining materials were tested.

## **TEST RESULTS:**

Detailed test results are listed on the attached data sheets. It should be noted that the high COF of the two PU materials caused the sled bounce and chatter across the runway as they were being pulled across the runway instead of moving smoothly across the runway, as was the case with the other materials.

Please contact me if you have any questions regarding this test program.

Very truly yours,

Philip D. Ross

# **GENERAL STATEMENT COVERING THIS REPORT:**

This report is submitted for the exclusive use of the Wilson Sporting Goods Company. Its significance is subject to the representative nature of the samples submitted and the tests and examinations made. No quotations from this report or use of the Gaynes Labs Incorporated name is permitted except as expressly authorized by Gaynes Labs Incorporated in writing.

Gaynes Labs Incorporated assumes no responsibility for the result of the observance or non-observance by the Wilson Sporting Goods Company of the product standard contained in this report or upon the relations between the Wilson Sporting Goods Company and any party or parties arising out of the sale or use of the product or otherwise.

The Wilson Sporting Goods Company shall indemnify and hold harmless Gaynes Labs Incorporated its employees and agents from any and all claims, demands, actions, and costs that may arise out of:

- (a) Any dangerous defect or content in the item being tested, whether apparent or not, which dangerous defect or content was not disclosed in writing to Gaynes Labs Incorporated by the Wilson Sporting Goods Company at the time the item was submitted for testing;
- (b) Differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested;
- (c) Any use of the tested item, whether by the Wilson Sporting Goods Company or a third party, following its return to the Wilson Sporting Goods Company from Gaynes Labs Incorporated.

Gaynes Labs Incorporated

Philip D. Ross

# GAYNES LABS INCORPORATED

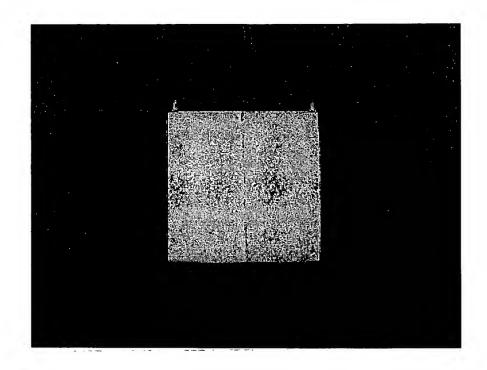


Photo No. 1 - Loop Samples Attached to the Sled Bottom

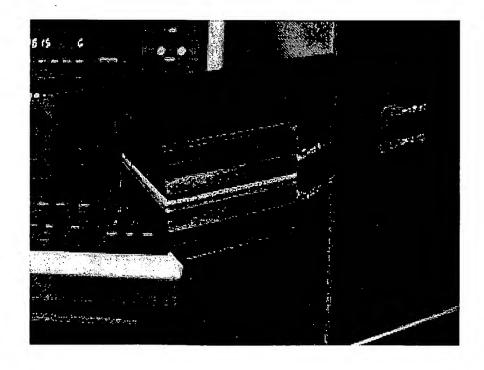


Photo No. 2 - Weight Modified Sled on Runway

# GAYNES LABS INCORPORATED

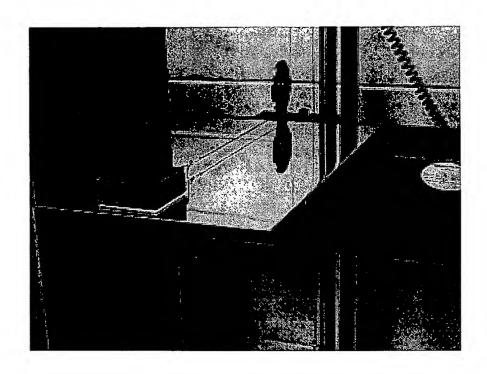


Photo No. 3 - 304 Stainless-Steel, #8 Mirror Surface Runway

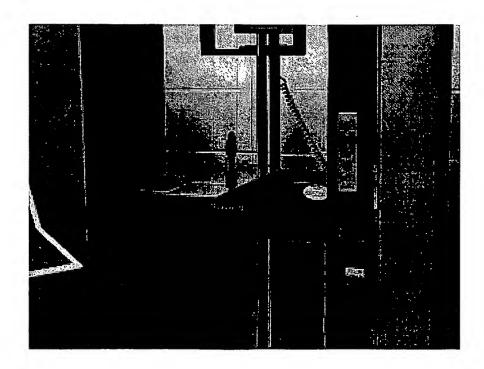


Photo No. 4 - Overall View of Test Setup

wilsow Spuritive GOODS COMPANY Gaynes Labs, Inc. Job No. 05448
Modified ASTM D1894-01 Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting
Material Type: White Single Tone PU Material

Sample	Staic Force	Sled Weight	Static	Av. Kinetic Force	Sled Weight	Kinetic
No.	(Grams)	(Grams)	COF	(Grams)	(Grams)	COF
-	1617 19	453.59	3.57	1227.30	453.59	2.71
,	1912 53	453.59	4.22	1305.90	453.59	2.88
7 1	2007 64	453.59	4.43	1259.10	453.59	2.78
ر 4	1793.41	453.59	3.95	1227.40	453.59	17.7
\$	1792.09	453.59	3.95	1198.70	453.59	2.64
Vorsae	1824.57	453.59	4.02	1243.68	453.59	2.74
StDev	146.87	0.00	0.32	40.82	0.00	0.00
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WILSON SPORTING GOODS COMPANY Gaynes Labs, Inc. Job No. 05448
Modified ASTM D1894-01 Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting
Material Type: Brown Dual-Tone PU Material

	Chair Force	Sled Weight	Static	Av. Kinetic Force	Sled Weight	Kineti
Sampte	(Grams)	(Grams)	COF	(Grams)	(Grams)	COF
	1450.26	453.59	3.20	1239.70	453.59	2.73
- (	1 5 6 92	453.59	3.43	1219.50	453.59	2.69
7	17 2071	453.59	3.28	1238.30	453.59	2.73
<b>^</b>	07 7131	453 59	3.35	1206.90	453.59	2.66
5	1871.33	453.59	4.13	1339.40	453.59	2.95
	1576 80	65 £57	3.48	1248.76	453.59	2.75
Average StDev	169.24	0.00	0.37	52.48	0.00	0.12
•	•••					

wILSUN SPURITING GOODS COMPANY Gaynes Labs, Inc. Job No. 05448
Modified ASTM D1894-01 Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting
Material Type: Burnt Orange Genuine Leather

Sample   State Force   Stad Weight   Static   Ap. Kinetic Force   Stad Weight   COF							
Corans)   COF   Corans)   Corans   Corans	-	, , , , , , , , , , , , , , , , , , ,	Cled Weight	Static	Av. Kinetic Force	Sled Weight	Kinetic
177.12	Sample	State role	(Grams)	COF	(Grams)	(Grams)	COF
179.11	۷٥.	(Crams)					
165.29   453.59   0.36   1157.78   453.59   155.29   155.39   15		17011	453 59	0.39	172.32	453.59	0.38
183.02   453.59   0.40   112.78   453.59   150.00   166.02   453.59   453		165.29	453.59	0.36	159.88	453.59	0.35
179,34     453.59     0.40     166.29     453.59       179,01     453.59     0.39     166.28     453.59       6.84     0.00     0.00     0.00       6.84     0.00     0.00     0.00       6.84     0.00     0.00     0.00	7	183.02	453.59	0.40	172.78	453.59	0.38
177.15   453.59   0.39   160.39   453.59   177.11   177.15   453.59   0.00	C .	20:001 179.34	453.59	0.40	164.02	453.59	0.36
177.15     453.59     0.39     165.88     455.59       6.84     0.00     0.00       7     0.00     0.00	2	179.01	453.59	0.39	160.39	453.59	0.35
0000 0000 0000 0000 0000 0000 0000 0000 0000		31 771	453.59	0.39	165.88	453.59	0.37
	Average StDev	6.84	0.00	0.02	6.30	0.00	0.01
The Chair Man							
Description of the Cheer Mo. 3							
Description of the Cheen Mo. 3							
No. 2 Chest No. 3							
Description of the Cheen No. 3							
Dave Chee, No. 3							
Dave Chast No 3							
				2 - 14 10 C			

Modified ASTM D1894-01 Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting Material Type: White Hook Material Gaynes Labs, Inc. Job No. 05448 WILSON SPORTING GOODS COMPANY

Ctair Force	Sled Weight	Static	Av. Kinetic Force	Sled Weight	Kinetic
אמוני דטונפ	(Grams)	COF	(Grams)	(Grams)	COF
(Grams)					
9 6 7 9	452.50	0.14	50.33	453.59	0.11
04.33	753.50	0.12	52.43	453.59	0.12
73.48	753.50	0.12	51.27	453.59	0.11
52.24	75.75	0.13	53.86	453.59	0.12
57.44	70.04	0.10	52.46	453.59	0.12
55.99	40.004	71.0			
4 7 7	02 637	0.13	52.07	453.59	0.11
56.70	0.00	0.01	1.34	0.00	0.00
7/.7					

Modified ASTM D1894-01 Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting Material Gaynes Labs, Inc. Job No. 05448 WILSON SPORTING GOODS COMPANY

Sample No.						
No.	Staic Force	Sled Weight	Static	Av. Kinetic Force	Sled Weight	Kinetic
	(Grams)	(Grams)	COF	(Grams)	(Grams)	COL
	01.70	453.59	0.19	71.84	453.59	0.16
- (	01.40	65 257	0.18	70.00	453.59	0.15
7	00.20	453.59	0.18	74.21	453.59	0.16
7	70.18	453.59	0.17	72.87	453.59	0.16
5	79.97	453.59	0.18	74.73	453.59	0.16
	81 34	65 57	0.18	72.73	453.59	0.16
Average	1.92	0.00	0.00	1.90	0.00	0.00
			Data Sheet No. 5			

Modified ASTM D1894-01 Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting Material Type: Smooth Plate Glass Gaynes Labs, Inc. Job No. 05448 WILSON SPORTING GOODS COMPANY

Sinis Av Kinetic Force Sled Weight Kinetic	(Grams)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	53.54	95 500	72.50	55.93	57.21	0.17 57.43 453.59 0.13	00 75	0.16	1.55											***************************************
	Sled Weight	(Grams)		453.59	453.59	453.59	453.59	453.59		453.59	0.00						***************************************					
	Staic Force	(Grams)		69.35	73.10	70.85	20.07	67.17	20.01	72.11	2.34											••••
	Sample	No.		_	,			4	S	Average	StDev											